SLR Consulting (Canada) Ltd.
100 Stone Road West, Suite 201, Guelph, ON N1G 5L3

December 4, 2023

Attention: Ms. Ayza Anwar/Mr. Saud Adi

1100 Burloak Drive, Suite 700
Burlington, ON, L7L 6B2

SLR Project No.: 241.30122.00000

RE: Response to Peer Review of Environmental Noise Study Peer Review of Proposed Residential Development 1120 Cooke Boulevard Burlington, Ontario

SLR Consulting (Canada) Ltd. (SLR), was retained by Adi Developments (Masonry) Inc., to conduct an environmental noise study in support of a Zoning By-Law Agreement for 1120 Cooke Boulevard, in Burlington, Ontario ("Project site"). The findings of the study were presented in "1120 Cooke Boulevard Environmental Noise Study", dated February 23, 2023 ("SLR Report").

Introduction

SLR received peer review comments on the above-noted report. Dillon Consulting Ltd. (Dillon) was retained by Halton Region (the Region) to conduct a peer review of the SLR Report. Their comments are found in the peer review entitled "Peer Review of the Environmental Noise Study for 1120 Cooke Boulevard", dated November 8, 2023. A copy of the peer review comments is provided in **Attachment A**.

This letter is prepared in response to the Dillon peer review and is structured to follow the order in which Dillon provided their comments requiring SLR's response. SLR has provided a response to all items raised by Dillon.

Noise Comments

Noise Comment #1

Section 2.3.2 of the Noise Report discusses that rail traffic data for the CN Oakville Subdivisions was obtained directly from CN. As the data used in the analysis was from 2018, CN should be contacted to confirm if the rail traffic data reflects the subdivision's current operations.

SLR Response to Noise Comment #1

SLR received updated rail traffic data for the CN Oakville Subdivision on October 24, 2023. The updated railway volumes are less than the volumes used in the SLR report, the assessment within the SLR is considered conservative, and no update is required at this time. Any future reports will be updated to reflect the change in CN data.

No report updates or additional assessment is required at this time.

Noise Comment #2

Section 2.4 of the Noise Report discusses that the FTA/FRA modelling algorithms and the FTA reference sound levels included in Cadna/A were used in the analysis.

The use of the FTA and FRA modelling algorithms are generally accepted in substitute for STAMSON. However, per the draft version of NPC-306 "Methods to Determine Sound Levels Due to Road and Rail Traffic", FRA should be used for heavy rail traffic, which includes freight and passenger trains.

Per NPC-306, FTA reference sound levels are reserved for light rail traffic, including transit, subways, and streetcars. As such, the Noise Report should be updated to use FRA sound levels for heavy railtraffic. Ultimately, the predicted transportation impacts should align with STAMSON.

SLR Response to Noise Comment #2

The use of both FTA and FRA has been accepted by many municipalities. CN has approved of this method of modeling predicted impacts on this project.

No report updates or additional assessment is required at this time.

Noise Comment #3

Section 2.4.2 of the Noise Report discusses the assessment of the Outdoor Living Areas (OLA) of the proposed development. As the rooftop OLAs of each tower were assessed, the assessment of private terraces and the at grade amenity area were excluded from the analysis. This approach is acceptable per the MECP NPC-300 Guidelines. Dillon recommends that the Type B warning clause in Appendix C be updated to include language describing which OLAs are protected by acoustic barriers so the occupants are aware.

SLR Response to Noise Comment #3

The SLR Report included text that all residences are to be notified of such acoustic barriers, which is more conservative than the Dillon recommendation. The warning clause text can be updated in future reports to indicate the location of applicable OLAs, as applicable.

No report updates or additional assessment is required at this time.

Noise Comment #4

Table 10 of the Noise Report summarizes the glazing requirements of the proposed development based on BPN-56 analysis. As the BPN-56 analysis was not provided in the Noise Report, Dillon is unable to review. However, the recommendations appear to be reasonable based on predicted impacts presented in the Noise Report.

SLR Response to Noise Comment #4

SLR will provide BPN-56 analysis during detailed design. Glazing recommendations are not impactful on the implementation of the draft amendments to the Official Plan and the Zoning By-law.

No report updates or additional assessment is required at this time.

Noise Comment #5

Section 3.2.1 of the Noise Report discusses the surrounding industries and stationary noise sources which were assessed. It is unclear if BAM Trucking or Bulkwood Products were considered in the stationary noise analysis. Per MECP D-Series Guidelines and the Halton Region's Land Use Compatibility Guidelines, the industrial operations appear to be located within the Potential Area of Influence of the proposed development.

Additionally, directly to the northwest of the proposed development are vacant lands zoned as an Employment Zone (GE2). Per the Halton Region's Land Use Compatibility Guidelines and MECP D-6, Section 4.4.5 "Where there is no existing industrial facility within the area designated/zoned for industrial land use, determination of the potential influence area shall be based upon a hypothetical "worst case scenario" for which the zoned area is committed".

The Noise Report should be updated to discuss (and assess if applicable) all industrial uses, including vacant lands, which are located within their respective Potential Areas of Influence of the proposed development.

SLR Response to Noise Comment #5

SLR agrees future discussion and investigation of the noted industries and potential uses of the vacant lots may be warranted. The impacts from the surroundings on the proposed development are anticipated to meet the applicable guideline limits (with proper controls, if required). Discussion and additional analysis (if required) of the above will be included in future report updates. Mitigation of hypothetical worst case scenario impacts, derived from the noted industries and vacant lands can be addressed during detailed design and is not impactful on the implementation of the draft amendments to the Official Plan and the Zoning By-law.

No report updates or additional assessment is required at this time.

Noise Comment #6

Section 3.2.1 of the Noise Report discusses the surrounding industries and stationary noise sources which were assessed. Figure 7 of the Noise Report shows the locations of sources assessed, and Table D.1 in Appendix D summarizes sound power levels and assumptions made.

It is unclear if the surrounding industries were contacted to request operational information and/or noise data. Table D.1 indicates that assumptions for stationary sources were from historic data for studies completed in the area. Dillon was not provided previous historic studies for review.

As industrial operations may vary over a day or week, observations recorded during a site visit may not be representative of a predictable worst case scenario for an operating industry. Noise impacts from crushing operations and an asphalt plant have the potential to cause significant compatibility issues, especially with operations within the Recommended Minimum Separation Distances (MECP D-Series Guidelines and the Halton Region's Land Use Compatibility Guidelines) of the proposed development.

As such, Dillon recommends that the surrounding industries (primarily KPM and St. Mary's / CBM Co) be contacted to request operational information and noise data. Additionally, a Freedom of Information (FOI) request can be completed with the MECP to obtain the required information.

SLR Response to Noise Comment #6

The industrial operations in the stationary noise assessment are based on previously approved noise studies in the area, as well as on-site observations. As part of future updates, the

surrounding industries will be contacted by SLR to request and confirm operational information of the above noted industries.

No report updates or additional assessment is required at this time.

Noise Comment #7

Table D.1 in Appendix D summarizes sound power levels and assumptions made for the stationary noise assessment. Both KPM and St. Mary's / CBM Co were primarily assumed to operate 24/7 (with the exception of pneumatic unloading of cement powder, located approximately 500 m from the proposed development).

As KPM and St. Mary's / Co are the only significant sources that were assessed to the southwest (based on Figure 7) of the proposed development, it is unclear why there is a significant difference in the predicted stationary noise impacts on the southwest façades between the daytime and nighttime periods. Based on the results presented in Figures 8a and 8b, and Table 16, the predicted nighttime impacts are 6 to 7 dB lower. The Noise Report should be updated to clarify the modelling inputs and results.

SLR Response to Noise Comment #7

SLR has reviewed the modelling and the report details, there is an inconsistency in the reported operational scenario for KPM crushing area in SLR Report Appendix Table D.1. Crushing activity only occurs during daytime hours based on historic studies in the area, as well as on-site observations. SLR Report Appendix Table D.1 has been updated to resolve the inconsistency and is included in **Attachment B**. The values presented in in Figures 8a and 8b, and Table 16 are correct and no additional changes are required.

Noise Comment #8

Figure 7 of the Noise Report outlines the location of the assessed stationary noise sources. The idling locomotives and impulsive knuckle thump sources associated with the CN Aldershot Rail Yard were assessed approximately 450 m to the northeast of the proposed development. Additionally, Table 13 of the Noise Report outlines the separation distance between the CN Aldershot Rail Yard and the proposed development as 325 m. Based on a review of satellite imagery and the Canadian Rail Atlas mapping, the separation distance of potential noise sources associated with the CN Aldershot Rail Yard and the proposed development is approximately 200 m directly to the northwest.

Based on the Jade Peer Review Response, Dillon understands that the rail yard stationary source assumptions in the Noise Report were based on information provided on a previous project from 2018, 101 Masonry Court. As the information used in the Noise Report was from 5 years ago, the Noise Report should be updated based on the more recent operational information provided in the Jade Peer Review.

SLR Response to Noise Comment #8

The SLR assessment was completed using rail yard information provided in the approved 101 Masonry Court Environmental Noise Assessment, which is located on the adjacent lands. The 101 Masonry Court assessment was completed using information provided by CN for the rail yard operations, as well as on-site observations. Furthermore, CN (through Jade Acoustics Inc. (Jade))

has agreed with SLR analysis in their letter dated August 4, 2023. Therefore the operational information with the SLR Report is considered to be appropriate for the assessment.

On October 13, 2023, the landowner submitted a Development Project Review form to CN and on October 26, 2023, received correspondence from CN, indicating that their counsel has been requested to proceed with drafting a CN development agreement and to prepare the registration of a CN environmental easement for the proposed development.

No report updates or additional assessment is required at this time.

Noise Comment #9

Section 3.3.1 of the Noise Report discusses that based on observations during the site visit impulsive noise was not observed to occur more than once per hour, and was assessed as such. Based on typical operations of a rail yard, and the NPC-300 requirement to assess the predictable worst case noise impacts, impulsive noise would be expected to be assessed at 9 or more times per hour.

As rail yard operations may vary over a day or week, observations recorded during a site visit may not be representative of a predictable worst case scenario for an operating industry. The Noise Report should be updated based on the recent operational information provided in the Jade Peer Review.

SLR Response to Noise Comment #9

SLR observed (3) separate knuckle connections. Of those 3 connections, only 1 was audible and measurable. SLR agrees that multiple activities may occur at the yard that can cause impulsive noises; SLR has analyzed and reported what was observed on site. Additionally, CN (through Jade) has acknowledged that the predicted impulse sound levels from the rail yard at the Project site comply with Class 4 guideline limits assessed at 9 or more impulses per hour in their letter dated August 4, 2023. Therefore, no additional assessment is required.

No report updates or additional assessment is required at this time.

Closure

We trust that the above has addressed all of Dillon's comments. Based on the above, our opinion on the potential for noise impacts are unchanged. In summary the opinions concluded in our original/updated noise assessment report, together with the current responses to the peer review of the Project, demonstrate that the proposed development can be compatible with the surrounding land uses.

Should you or they have any additional questions, please do not hesitate to contact us. Yours sincerely,

SLR Consulting (Canada) Ltd.





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Attachments A – Peer Review Comments - Dillon

B – Report Appendix Table D.1

Attachment A

Response to Peer Review of Environmental Noise Assessment for the proposed residential development at 1200 Cooke Boulevard, Burlington

1200 Cooke Boulevard, Burlington

SLR Project No.: 241.301222.00000

December 4, 2023

Memo

To: Adam Huycke, Senior Planner, Halton Region

From: Lucas Arnold, P.Eng., Dillon Consulting Limited

Date: November 8, 2023

Subject: Peer Review of the Environmental Noise Study for 1120 Cooke Boulevard

Our File: 23-7009

Dillon Consulting Limited (Dillon) was retained by Halton Region (the Region) to complete a peer review of an Environmental Noise Study in support of a proposed residential development located at 1120 Cooke Blvd in Burlington, Ontario.

It is Dillon's understanding that the proposed development will consist of three residential towers ranging from 29 to 33 stories. The following documents have been prepared as a requirement of the planning application:

- "1120 Cooke Boulevard, Environmental Noise Study" (Noise Report), prepared by SLR Consulting Ltd., dated February 2023.
- "Response to Peer Review of Environmental Noise Study Peer Review of Proposed Residential Development 1120 Cooke Boulevard Burlington, Ontario" (Jade Peer Review Response), prepared by SLR Consulting Ltd., dated June 26, 2023.

Technical Peer Review

A peer review of the Noise Report was completed in consideration of:

- The Ministry of the Environment, Conservation and Parks (MECP) D-Series Guidelines for Land-Use Compatibility (D-Series);
- The MECP's Environmental Noise NPC-300 Guideline (NPC-300);
- Guidelines for New Development in Proximity to Railway Operations (The Federation of Canadian Municipalities and the Railway Association of Canada);
- The Ontario Environmental Protection Act;
- Ontario's Provincial Policy Statement;
- Halton Region's Land Use Compatibility Guidelines; and
- Halton Region's Noise Abatement Guidelines.

Noise Review

The findings of the noise review are as follows:

1. Section 2.3.2 of the Noise Report discusses that rail traffic data for the CN Oakville Subdivisions was obtained directly from CN. As the data used in the analysis was from 2018, CN should be contacted to confirm if the rail traffic data reflects the subdivision's current operations.

2. Section 2.4 of the Noise Report discusses that the FTA/FRA modelling algorithms and the FTA reference sound levels included in Cadna/A were used in the analysis.

   The use of the FTA and FRA modelling algorithms are generally accepted in substitute for STAMSON. However, per the draft version of NPC-306 "Methods to Determine Sound Levels Due to Road and Rail Traffic", FRA should be used for heavy rail traffic, which includes freight and passenger trains.

   Per NPC-306, FTA reference sound levels are reserved for light rail traffic, including transit, subways, and streetcars. As such, the Noise Report should be updated to use FRA sound levels for heavy rail traffic. Ultimately, the predicted transportation impacts should align with STAMSON.

3. Section 2.4.2 of the Noise Report discusses the assessment of the Outdoor Living Areas (OLA) of the proposed development. As the rooftop OLAs of each tower were assessed, the assessment of private terraces and the at grade amenity area were excluded from the analysis. This approach is acceptable per the MECP NPC-300 Guidelines. Dillon recommends that the Type B warning clause in Appendix C be updated to include language describing which OLAs are protected by acoustic barriers so the occupants are aware.

4. Table 10 of the Noise Report summarizes the glazing requirements of the proposed development based on BPN-56 analysis. As the BPN-56 analysis was not provided in the Noise Report, Dillon is unable to review. However, the recommendations appear to be reasonable based on predicted impacts presented in the Noise Report.

5. Section 3.2.1 of the Noise Report discusses the surrounding industries and stationary noise sources which were assessed. It is unclear if BAM Trucking or Bulkwood Products were considered in the stationary noise analysis. Per MECP D-Series Guidelines and the Halton Region's Land Use Compatibility Guidelines, the industrial operations appear to be located within the Potential Area of Influence of the proposed development.

   Additionally, directly to the northwest of the proposed development are vacant lands zoned as an Employment Zone (GE2). Per the Halton Region's Land Use Compatibility Guidelines and MECP D-6, Section 4.4.5 "*Where there is no existing industrial facility within the area designated/zoned for industrial land use, determination of the potential influence area shall be based upon a hypothetical "worst case scenario" for which the zoned area is committed*".

   The Noise Report should be updated to discuss (and assess if applicable) all industrial uses, including

vacant lands, which are located within their respective Potential Areas of Influence of the proposed development.

6. Section 3.2.1 of the Noise Report discusses the surrounding industries and stationary noise sources which were assessed. Figure 7 of the Noise Report shows the locations of sources assessed, and Table D.1 in Appendix D summarizes sound power levels and assumptions made.

   It is unclear if the surrounding industries were contacted to request operational information and/or noise data. Table D.1 indicates that assumptions for stationary sources were from historic data for studies completed in the area. Dillon was not provided previous historic studies for review.

   As industrial operations may vary over a day or week, observations recorded during a site visit may not be representative of a predictable worst case scenario for an operating industry. Noise impacts from crushing operations and an asphalt plant have the potential to cause significant compatibility issues, especially with operations within the Recommended Minimum Separation Distances (MECP D-Series Guidelines and the Halton Region's Land Use Compatibility Guidelines) of the proposed development.

   As such, Dillon recommends that the surrounding industries (primarily KPM and St. Mary's / CBM Co) be contacted to request operational information and noise data. Additionally, a Freedom of Information (FOI) request can be completed with the MECP to obtain the required information.

7. Table D.1 in Appendix D summarizes sound power levels and assumptions made for the stationary noise assessment. Both KPM and St. Mary's / CBM Co were primarily assumed to operate 24/7 (with the exception of pneumatic unloading of cement powder, located approximately 500 m from the proposed development).

   As KPM and St. Mary's / Co are the only significant sources that were assessed to the southwest (based on Figure 7) of the proposed development, it is unclear why there is a significant difference in the predicted stationary noise impacts on the southwest façades between the daytime and nighttime periods. Based on the results presented in Figures 8a and 8b, and Table 16, the predicted nighttime impacts are 6 to 7 dB lower. The Noise Report should be updated to clarify the modelling inputs and results.

8. Figure 7 of the Noise Report outlines the location of the assessed stationary noise sources. The idling locomotives and impulsive knuckle thump sources associated with the CN Aldershot Rail Yard were assessed approximately 450 m to the northeast of the proposed development. Additionally, Table 13 of the Noise Report outlines the separation distance between the CN Aldershot Rail Yard and the proposed development as 325 m. Based on a review of satellite imagery and the Canadian Rail Atlas mapping, the separation distance of potential noise sources associated with the CN Aldershot Rail Yard and the proposed development is approximately 200 m directly to the northwest.

   Based on the Jade Peer Review Response, Dillon understands that the rail yard stationary source

assumptions in the Noise Report were based on information provided on a previous project from 2018, 101 Masonry Court.

As the information used in the Noise Report was from 5 years ago, the Noise Report should be updated based on the more recent operational information provided in the Jade Peer Review.

9. Section 3.3.1 of the Noise Report discusses that based on observations during the site visit impulsive noise was not observed to occur more than once per hour, and was assessed as such. Based on typical operations of a rail yard, and the NPC-300 requirement to assess the predictable worst case noise impacts, impulsive noise would be expected to be assessed at 9 or more times per hour.

   As rail yard operations may vary over a day or week, observations recorded during a site visit may not be representative of a predictable worst case scenario for an operating industry. The Noise Report should be updated based on the recent operational information provided in the Jade Peer Review.

Closing

Dillon has performed a peer review of the Noise Report for the proposed development at 1120 Cooke Boulevard in Burlington, Ontario. Based on the finding of the peer review, the Noise Report should be updated to address the comments contained within this memo in order to justify compatibility between the proposed development and the surrounding land uses.

Should you have any questions about our review, please don't hesitate to contact us.

Sincerely,

DILLON CONSULTING LIMITED



Lucas Arnold, P.Eng.
Associate, Acoustic Engineer

Attachment B

Response to Peer Review of Environmental Noise Assessment for the proposed residential development at 1200 Cooke Boulevard, Burlington

1200 Cooke Boulevard, Burlington

SLR Project No.: 241.301222.00000

December 4, 2023

Table D.1: Summary of Noise Source Sound Power Levels

Source Description	Maximum Sound Power Levels (1/1 Octave Band Levels)									Total PWL (dBA/ dBAI)	Notes
	32 (dBA/ dBAI)	63 (dBA/ dBAI)	125 (dBA/ dBAI)	250 (dBA/ dBAI)	500 (dBA/ dBAI)	1000 (dBA/ dBAI)	2000 (dBA/ dBAI)	4000 (dBA/ dBAI)	8000 (dBA/ dBAI)		
Surrounding Commercial											
HVAC (5-ton)	77	80	81	81	80	78	74	70	64	83	- based on SLR historical data - In Continuous Operation during daytime and nighttime
HVAC (10-ton)	80	83	84	84	83	81	77	73	67	86	- based on SLR historical data - In Continuous Operation during daytime and nighttime
HVAC (20-ton)	89	92	93	93	92	90	86	82	76	95	- based on SLR historical data - In Continuous Operation during daytime and nighttime
101 Masonry Court Mechanical Equipment											
Packaged Rooftop System	0	0	94	91	89	89	85	83	82	93	- based on Received Mechanical Report for 101 Masonry Court - In Continuous Operation during daytime with 30-minute duty cycling during nighttime
AGZ-D Air-Cooled Scroll Chiller	0	92	88	89	89	86	82	80	74	91	- based on Received Mechanical Report for 101 Masonry Court - In Continuous Operation during daytime with 30-minute duty cycling during nighttime
Large Emergency Generator	59	72	85	91	92	90	88	84	79	97	- based on Received Mechanical Report for 101 Masonry Court - Only during daytime hours for 30 minutes
100GGHH Rooftop Generator	58	72	88	90	91	91	91	92	90	97	- based on Received Mechanical Report for 101 Masonry Court - Only during daytime hours for 30 minutes
Aberdeen GO Station											
Idling Locomotive - GO Train	117	127	114	110	103	98	97	95	90	108	- based on SLR historical data for MP40 locomotives. - two (2) locomitives included in noise model: - idling during stop (10 min dur., 3 trains/hr during daytime; 10 min dur, 2 trains/hr during night) - idling during refueling (1 hr dur assumed, 1 train/hr, daytime/evening hours only).
Idling Fuel Truck	98	101	101	97	96	96	92	84	78	100	- based on SLR historical data - 1 hr duration assumed - operation during daytime / evening hours only.
Aberdeen GO Station											
Idling Locomotive - GO Train	117	127	114	110	103	98	97	95	90	108	- based on SLR historical data for MP40 locomotives. - two (2) locomitives included in noise model: - idling during stop (10 min dur., 3 trains/hr during daytime; 10 min dur, 2 trains/hr during night) - idling during refueling (1 hr dur assumed, 1 train/hr, daytime/evening hours only).
Idling Fuel Truck	98	101	101	97	96	96	92	84	78	100	- based on SLR historical data - 1 hr duration assumed - operation during daytime / evening hours only.
Aberdeen Rail Yard											
Idling Locomotive - Freight Train	117	113	109	97	103	102	99	92	89	106	- based on historical data for studies completed in the area. - three (3) locomotives assumed to be idling on west side of Rail Yard. - 24/7 operation assumed.
Knuckle Thump (impulse)	-	126	120	118	117	116	113	109	102	120	- based on SLR historical data - 24/7 operation assumed.
KPM Industries											
Crushing Area - Excavator, Front end loader, Grinder	117	122	118	116	111	111	106	100	88	115	- based on historical data for studies completed in the area. - Assumed to operate during daytime hours only.
Asphalt Plant	123	125	125	124	111	107	103	101	96	118	- based on SLR historical data - 24/7 operation assumed.
St. Mary's Cement / CBM											

Ready-Mix Plant - Truck Loadout	105	109	108	109	104	101	100	95	87	107	- based on SLR historical data - continuous flow of 7.5 trucks per hour (approx based on historical data) - duration at high idle assessed based on a historical 5 min/truck. - operations assumed during all periods of the day.
Ready-Mix Plant - Truck Wash and Mix	105	109	108	109	104	101	100	95	87	107	- based on SLR historical data - continuous flow of 7.5 trucks per hour (approx based on historical data) - duration at high idle assessed based on a historical 8 min/truck. - operations assumed during all periods of the day
Ready-Mix Plant - Pneumatic Unlaoding of Cement Powder	116	118	111	110	108	107	102	95	86	111	- based on historical SLR data - non-tonal at receptor (approx.750 m) - duration anticipated to be 1 hr or longer - daytime filling only